

REMARKS

In this Response, Claims 1, 2, 4, 5, 19, 20, 22, 23, 36, 37, 39 and 40 are amended, and no claims are added or cancelled. Claims 1-17, 19-34, 36-43 and 45 remain in the Application. Reconsideration of the pending claims is respectfully requested in view of the following remarks.

I. Double Patenting Rejection

Claims 1-17, 19-34, 36-43 and 45 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-30 of U.S. Patent Application No. 10/949,464, which has been issued into a patent (U.S. Patent No. 7,381,881) on June 3, 2008, and has the same assignee as the present application.

Applicant submits the claims of the conflicting patent and the current application, as amended, include distinct features. For example, independent Claims 1, 19 and 36, as amended, include the element of “self-sustained vibration,” which is not present in the claims of the conflicting patent. Accordingly, withdrawal of the double patenting rejection is respectfully requested.

However, Applicant reserves the opportunity to file any appropriate response (e.g., a terminal disclaimer) in the event that the pending claims are otherwise allowable.

II. Claim Interpretation

The Examiner indicates that there is no functional or mathematical difference between simulating a player blowing along the string and simulating the string subject to a longitudinal driving force (Page 3 of the Final Office Action). Without conceding the propriety of the interpretation, Applicant submits that the rejection based on this interpretation is moot in view of the current amendments to Claims 1, 19 and 36.

III. Claims Rejected Under 35 U.S.C. §102(b)/103

Claims 1-17, 19-34, 36-43 and 45 stand rejected under 35 U.S.C. §102(b)/103 as being clearly anticipated by inventor Sapp (“Sapp”) or, in the alternative under 35 U.S.C. §103(a) as obvious over Sapp in view of Chin et al., *A numerical model of a towed cable-body system*, Anziam J. 42 (E) pp. C362-C384, 2000 (“Chin”).

Independent Claim 1, as amended, recites:

“creating a sound by simulating self-sustained vibration of a string having a movable end, the string subject to a force exerted by a stream of a fluid medium flowing in a direction that has a component along a longitudinal axis of the string; and
relating an excursion in time of the movable end to the force and relating movement of the string in time to the excursion of the movable end to simulate the self-sustained vibration.”

Claim 1 is amended to more clearly point out that the subject matter of the present invention that Applicant seeks to claim. The background of Sapp discloses a number of sound synthesis methods that use a discreet recursion formula of a wave equation to simulate the movement of a string (paragraph 26). However, these methods do not produce self-sustained vibration of the string. The background of Sapp also discloses a common method for achieving self-sustained vibration of a string using bow pressure (paragraph 27), and another method for achieving self-sustained oscillation in wind instruments (paragraph 28). None of the methods disclosed in the background of Sapp creates a sound using self-sustained vibration of a string that is subject to a force exerted by a stream of a fluid medium.

Further, the string in the claimed method has a moveable end. By contrast, the string disclosed in the background of Sapp has two immovable ends. The Examiner recognizes this difference, but asserts that the moveable ends of the strings are arbitrary boundary conditions of the equation disclosed in the background of Sapp (page 4 of the Final Office Action). Applicant submits that this “boundary condition” is not arbitrary as asserted by the Examiner. As described in the specification at paragraph, this “boundary condition” of the string is an element that allows self-sustained vibration to occur. There is no indication in the background of Sapp that self-sustained vibration of a string can be produced when an end of the string is set to a particular condition.

The Examiner also relies on Chin for disclosing the modeling of the movement of a cable connecting a body and an airplane that tows the body. The Examiner characterizes the cable as the recited string having a moveable end. However, Chin does not disclose self-sustained vibration is produced on the cable as a result of the towing. Also, the towing action disclosed by Chin is unrelated to sound creation recited in Claim 1.

The Examiner further indicates that the equations recited in the claims are identical to those disclosed in the background of Sapp. As mentioned above, the wave equation and its

discreet form, as disclosed in the background of Sapp, are used by sound synthesis methods that do not produce self-sustained vibration of the string (paragraph 26). By contrast, the claimed method produces self-sustained vibration of the string, which is not taught or suggested by the cited references.

Therefore, amended Claim 1 and its dependent claims are neither anticipated by Sapp nor obvious over Sapp in view of Chin.

Analogous discussions apply to independent Claims 19 and 36, which are amended to include similar limitations. Their dependent claims are patentable by virtue of dependency. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejections of Claims 1-17, 19-34, 36-43 and 45 under 35 U.S.C. §102(b)/103.

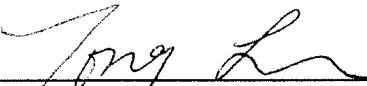
CONCLUSION

In view of the foregoing, it is believed that all claims are now in condition for allowance and such action is earnestly solicited at the earliest possible date. If there are any additional fees due in connection with the filing of this response, please charge those fees to our Deposit Account No. 02-2666.

Respectfully submitted,

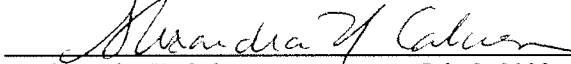
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